Forecasting the Carcass

Ultrasound technology can increase profits, quality.

by ***Miranda Reiman***

Experience and "a good eye" drive sorting at many feedyards across the United States, but more producers are realizing the value of a sneak peek of what's under the hide. There are three main ultrasound-sorting methods for feeders, all means to a more uniform end.

"The biggest part is just trying to maximize profit; that's our whole goal with the system," says veterinarian Paul Ritter, Monument Station Ultrasound Services LLC. Ritter of Monument, Kan., trained under Kansas State University's (K-State's) legendary John Brethour to become a licensed technician for the Cattle Performance Enhancement Co. (CPEC) system.

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Micro Beef Technologies, Amarillo, Texas, and Walter & Associates' National Centralized Ultrasound Processing Lab & Technology Center (The CUP Lab) of Ames, Iowa, also have sorting systems. All three techniques try to make customers more successful at selling cattle on the grid, but take slightly different approaches.

CPEC program

"I ask them where they want to market their cattle, and that's how I set up the parameters in the system," Ritter says. "The computer actually sorts the cattle based on backfat, marbling and live weight as they relate to each individual's optimum profit point."

Typically, Ritter scans cattle at reimplant time. The feedyard can sort cattle right out of the chute, or tag them and send them back to their home pen. "We identify cattle based on how long we can feed them for whatever market they're targeting, so that could include a premium-based market," he says.

Feedlots can train their own employees, buying an Aloka Ultrasound machine and laptop computer loaded with the patented CPEC software from the company. Or, they may decide to hire a licensed CPEC technician like Ritter.

There are about three-dozen licensed CPEC technicians across the country who scan and sort cattle on a contract basis. In addition, 22 feedlots, eight universities and one beef marketing business currently use the CPEC software program to scan and sort cattle for each business's marketing target.

"You have to understand carcasses," Ritter says. "Probably the hardest thing for people to get a grasp of is the difference between quality grade and yield grade. Those are two different parameters."

Feeders who do not own a system pay a per-head fee, but Ritter says they soon realize a return on that investment. "Most of the feedyards I go to are recognizing a minimum $30 per head in overall profit," he says. "They're able to market cattle when they need to, eliminating discounts." They'll have fewer YG challenges, and they will be able to gauge ahead of time if the cattle will do well on a quality-based grid, he says.

Timing can make all the difference. "If cattle don't genetically have the ability to marble, they usually deposit more external fat the longer you feed them," Ritter says.

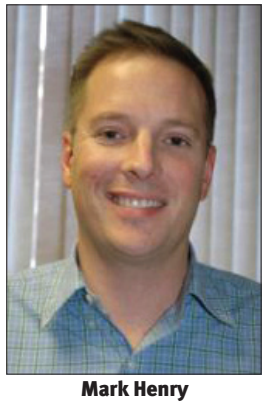
Micro Beef's system

The Accu-Trac® ECM (electronic cattle management) System from Micro

Beef Technologies can be tailored to each feedyard's goals.

"Our sorting system started out with the basic idea that we wanted to measure and manage the diversity out of a population of cattle," Allen Jackson of Micro Beef says. "We can set targets with our system based on grid specifications."

The Accu-Trac method uses ultrasound as one piece of information to determine when cattle should be marketed.


Mark Henry

"The video image of the animal gives us proportional measurements," Jackson says. "We'll calculate frame score, which gives the computer a target weight for that animal. Then ultrasound will determine ribeye area, backfat and marbling score."

These data are taken upon arrival and then halfway through the feeding period. That allows feeders to judge the growth curve and make a final sort.

"We designed our system to optimize pen use," Jackson says. "The second time through the chute, it makes a sort-pen decision and will put an animal into a new market group. They'll finish up there and go to the packing plant commingled."

The cattle are filtered through five "stations" to collect all the needed information, but Jackson says the transition is smooth.

"We have designed a processing method that's kind of an assembly-line approach to capturing all of this data," he says. "A computer opens and closes the gates so we can minimize manpower needs. Once we've got all of an animal's data, the computer accepts it into a sort pen. The tolerance is less than 2 seconds before we have our feedback."

The CUP Lab

A leader in the purebred scanning field, The CUP Lab recently introduced the newest ultrasound sorting method.

"We've developed a tool to allow feedlot managers, owners and operators to sort cattle based on ultrasound estimates of quality grade and yield grade," says Mark Henry, operations manager for the lab. "Our hope is that they'll be able to identify cattle that can hit the grids they want to market to."

Cattle can be scanned at receiving, reimplant time or just prior to harvest to make the first sort from a pen.

"It really shouldn't take more than a minute or two per animal to run them through the chute," he says. Marbling score, backfat and ribeye area calculations can help a feeder decide when and where to sell.

"It is simply a tool to know, before you sell your cattle, what they are," Henry says. "We won't be the ones to tell the customer how to use the information. The customer will actually know better. They know how they want to market their cattle and maximize their profits."

This system's pricing is based on what a feeder wants to know. For example, one could determine just the fat thickness or just the marbling score. Charges are determined by the amount and complexity of the information.

"We just broke it up to fit the customers' needs a little bit better," he says.

The equations were derived from calculations currently used on more than 150,000 registered cattle.

"This is the first time the models have been available to the commercial sector," Henry says.

Feeders have the option to purchase the system and train themselves, or use a CUP-certified technician who owns the program. No matter how a business chooses to use the service, Henry has one objective.

"Ultimately, if it doesn't make the feeder more money, they're not going to do it," he says. "We understand that, so our No. 1 priority is making sure the program does what it's intended to do."

Improving profit, product

All forms of this technology give feeders more comfort when selling on a grid.

"It produces a more uniform population of cattle with a higher grid value than the standard population," Jackson says.

Ultrasound data can help commercial cow-calf producers improve their herds, if it's communicated through the production chain.

Ritter says, "I try to match up my commercial cattle producers with my purebred breeders. It all starts with genetics, so if I can help my commercial producers find genetics that work for them, I can take that back to the purebred breeders."

And that's where the change starts, Henry notes. "This technology has improved a lot of cattle through the purebred side; we've seen that," he says. "They've made progress selecting for ribeye area and marbling, by identifying which ones are going to be outliers. We're going to see that trickle down to the feedlot level."

Tools that can add money to the bottom line while improving quality are often hard to come by. In today's competitive environment, ultrasound can do just that.

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